TRU TeamWorks

May 6, 2009

WIPP Quick Facts
(As of 5-5-09)

7,355
Shipments received since opening
(7,137 CH and 218 RH)

59,758
Cubic meters of waste disposed
(59,665 CH and 93 RH)

112,303
Containers disposed in the underground
(112,088 CH and 215 RH)

RH waste from Savannah River Site arrives safely at WIPP

File photo

And the Savannah River Site (SRS) makes four. The first two shipments of remote-handled transuranic (RH-TRU) waste from SRS in South Carolina arrived safely at the WIPP on April 24, making it the fourth site to ship RH-TRU waste to WIPP.

SRS is also the fourth generator site to ship both contact-handled (CH) and RH waste to WIPP. WIPP has received 976 contact-handled TRU waste shipments from SRS since 2001, underscoring DOE's pledge to clean up defense radioactive wastes from generator sites around the country. SRS is now the fourth generator site to ship both CH and RH waste to WIPP.

"Working with SRS and our regulators we continue to make consistent progress on environmental cleanup. Many capable people have worked for months to make these shipments possible. I want to congratulate everyone involved for a job well done," said Dr. Dave Moody, Carlsbad Field Office manager.

SRS obtained final approvals in March from the U.S. Environmental Protection Agency, the New Mexico Environment Department and the DOE Carlsbad Field Office to certify and ship RH-TRU waste to WIPP. The agencies reviewed waste records, waste examination processes and equipment to ensure RH-TRU wastes from SRS meet federal and state disposal standards at WIPP.

The RH waste shipped from SRS this week originated at the Battelle-Columbus Site in Ohio, which is now decommissioned. With prior approval by the state of South Carolina, the waste was transferred to SRS in 2006 for eventual transport and final disposal at WIPP. The DOE Savannah River Site near Aiken, S.C., was constructed in the early 1950s to produce materials for the fabrication of nuclear weapons in support of the nation's defense programs.

WIPP lends Riverside School a safety hand

Students from the Riverside Elementary School gifted program are close to completing their landscape and xeriscape project. In order for the students to complete this project, safety had to be at the forefront.

Enter WIPP.

WIPP lent the school hard hats, safety glasses and safety vests for the students to use during the project.

Glenace Butler, the school's gifted program facilitator, said the equipment lent by WIPP allowed the students to not only do the job, but also learn the value of safety while working.

"The safety equipment made the whole project even more fun and safer for the students," Butler said. The hard hats were really the biggest hit!"

Concrete downloaded for Maintenance Shop

Last month, the salt shaft was given a new hoisting task, concrete. Mine Operations used the salt shaft to download concrete to the underground to build a pad in the North Bay of the Underground Maintenance Shop.

Approximately 23 cubic yards of concrete were downloaded into the mine from cement trucks on the surface near the salt shaft. The concrete was taken down in buckets that were attached to the salt shaft conveyance, and was transported at approximately three-fourths cubic feet at a time. There were a total of 29 trips that were made to the underground to get the necessary concrete down build the pad.

One of the project challenges was figuring out how the concrete pad will hold up against salt creep. Bill Cox of Surface Ops and Maintenance said Mine Engineering took that into account and developed a way to extend the life of the pad.

“The pad has anywhere from one to three feet all around the rib for expansion to keep the pad from breaking apart,” Cox said. “This gives it relief from the settling and bowing of ribs and floor heave, making the pad last longer.”

Underground operations were not halted during the process of completing the concrete pad. RH waste was downloaded as normal that day during the completion of the concrete project. Mine Operations was also able to use the time to download a new roof bolter that was assembled in the underground.

Several work groups made this operation a success, including Zone 0, Mine Operations, Mine Engineering, Hoisting Operations, Underground Maintenance, Constructors Inc., Safety, Security Walls and Facility Restoration.

“This project would not have gotten done without the cooperation of all the groups working together,” Cox said. “Their professionalism made this job go off without a hitch, and everybody in on this project deserves a pat on the back.”

H1N1 Flu (Swine Flu) Prevention Tips

The Centers for Disease Control and Prevention (CDC) has given tips to help prevent this virus from spreading:

- Wash your hands often
- Avoid contact with those infected
- Cover your cough or sneeze
- If you feel ill, stay home and contact your doctor

WIPPTREX simulation challenges first responders under unlikely scenarios

It was just one of those days.

A carload of bank robbers races down Interstate 75 in Georgia, knocking over a motorcycle in an attempt to evade police. Another vehicle swerves to avoid the accident, but then crashes into a truck carrying TRU waste to WIPP. Yet another car then plows into the back of the WIPP truck.

There are multiple injuries; the motorcyclist is pronounced dead at the scene. The police chase of the bank robbers escalates into a hostage situation. Rescue workers

- Try to stay six feet away from other people
- Avoid public gatherings

The symptoms of the H1N1 Flu are:

- Fever (greater than 100 degrees)
- Sore throat
- Cough
- Stuffy nose
- Chills
- Headache and body ache
- Fatigue

begin taking samples near the WIPP truck to ensure there were no radiation leaks.

And cut!

Thankfully, the bad-gone-much-worse situation was all a mock training scenario, a Waste Isolation Pilot Plant Transportation Exercise (WIPPTREX) staged in Calhoun County, Georgia. The agencies involved were receiving Modular Emergency Response Radiological Transportation Training (MERRTT) given to first responders near or along WIPP shipping routes.

The host of participating agencies included the U.S. Department of Energy's (DOE) Radiological Assistance Program and Georgia's Department of Public Safety.

"We require each region to do one (training session) every two years and the State of New Mexico to do one every two years," said Bill Mackie, Instructional Team Manager for the DOE Carlsbad Field Office.

The entire scenario actually took place at a park in Calhoun County, well away from potentially-confused motorists. There are no WIPP routes along Georgia's segment of I-75, but the scenario was still approved for training purposes. At one point, Mackie noted, I-75 may have been used to bring waste from Oak Ridge National Laboratory (ORNL) to the Savannah River Site (SRS). In the March 19 theoretical scenario, the WIPP tractor-trailer involved was carrying contact-handled (CH) waste from Oak Ridge to WIPP.

Washington TRU Solutions (WTS) External Emergency Management trainer David Lewis worked with state officials to develop the hypothetical situation. The scenario is the final segment of MERRTT training.

"Each training session runs a maximum of 16 hours," Mackie said. "We go (to a region) and train until everybody that wants training is trained."

That means Lewis and other trainers have been working with a variety of participating regional emergency response agencies over the past six months.

In all such scenarios, first responders are trained to stop several hundred feet from the scene of the accident to first test for radiation. WIPP's drivers are also trained to assist the scene's incident commander with all relevant information.

There was no radiation leak- even in the hypothetical exercise- but rescue workers did have to deal with the scenario's dozen mock injuries. Accident victims were triaged on site, then transported to the local hospital. SWAT handled the hostage situation, staged at a local livestock pavilion.

The training exercise also includes a plan for contact with the public, media outlets and area elected officials.

Observers watched from a set of bleachers near the accident scene. After the scenario concluded, participants discussed how the rescue process went.

"I think they did very well," Mackie said about the Georgia event.

The training scenarios often serve an additional purpose, as they typically draw attention from curious local media outlets. It's a good chance to stress WIPP's commitment to safety and to note the thousands of safe shipments that have been made.

"We heavily stress safety. That's the name of the game," Mackie said.

National Environmental Education Week

Bobby St. John talks to fifth graders about WIPP as part of National Environmental Education Week. The event took place at Sitting Bull Falls State Park April 20-24. WTS Communication and WRES supported the event.

"Element"-ary visit:
Distinguished scientists tour WIPP

You might say Dr. Sigurd Hofmann was "in his element" during a recent visit to the WIPP.

Hofmann is a leader of the "new elements" team of the Center for Heavy Ion Research in Darmstadt, Germany. His group is responsible for three current entries on the Periodic Table of the Elements, with several more pending. Hofmann is also the author of the book "On Beyond Uranium- Journey to the End of the Periodic Table."

Hofmann was accompanied by Dr. Peter Moeller, a Los Alamos National Laboratory theoretical physicist, during a March 16 tour of WIPP's underground repository.

Norbert Rempe (WTS), Principal engineer and geologist, led the distinguished visitors through the underground. The tour included a visit to the Enriched Xenon Observatory. The particle physics collaboration, headed by Stanford University, seeks to use a rare nuclear process called double-beta decay to measure the mass of a sub-atomic particle called a neutrino.

Hofmann and Moeller have been collaborating in the search for and discovery of super-heavy elements, which are generated by high-energy accelerators. Hofmann's team is credited with discovering the last three officially named elements: 109 (Meitnerium), 110 (Darmstadtium) and 111 (Roentgenium). Roentgenium is named for Wilhelm Conrad Röntgen, who produced and detected the X-ray in 1895. Experiments resulting in the formation of elements 112 through 118 have also been recorded, but have yet to be ratified.

Superheavy elements have half lives ranging from several hours to a few microseconds.

During his visit to Carlsbad, Hofmann also delivered his presentation "On the Discovery of Superheavy Elements" to the Carlsbad chapter of the American Nuclear Society.

WIPP Personnel Compete in The Great American Bike Race

Steve Kouba (WRES) recently served as event coordinator for the 8th annual Great American Bike Race. The race had 26 total participants, including some from WIPP. Above (l to r): Rick Beauheim (SNL), Moo Lee (SNL) and Kouba.

Pollution Prevention in Action: Laboratory chemicals reduced at WIPP

Sustainability is an ongoing process that strives to make the earth a cleaner place to live. When people think of "Going Green" they tend to think of recycling and hybrid cars, but there are several aspects that go into a pollution prevention program, and WIPP's Environmental Management System (EMS) strives to find new ways to ensure sustainable practices are being put to use here at WIPP.

Environmental Specialist Robbin Spoon has put one of the main aspects of environmental sustainability to work here at WIPP. She has obtained Zobell's and Light's Solutions, chemicals used in WIPP's mobile laboratory, in pre-made form for commercial use here at WIPP. Because of this, there is now a safer and more cost efficient practice to obtain the solution for use at the site.

Zobell's and Light's solutions are used as reference standards when determining oxidation reduction potential (ORP) in drinking, processed and waste waters. This means when the ORP is determined, it is compared to Zobell's and Light's solutions in order to demonstrate chemical stability.

Spoon said the advantage of purchasing the solution from an outside vendor eliminates the need to prepare the solutions at work, reducing chemical inventory and quantities of hazardous chemicals on hand, which is a main goal of pollution prevention. Spoon also said that each reagent purchased comes with a certificate of analysis, which ensures the lab analysts that the solution conforms to industry standards.

"This allows us to eliminate five solid chemicals and one concentrated acid that are required for making each solution," Spoon said. "The cost of pre-made chemical solutions is less expensive when compared with the cost of chemicals required to make them in-house. And the vendors provide Certificates of Analysis to support our Quality Assurance/Quality Control Program for all analyses conducted."

The sustainable practices campaign was launched by the pollution prevention program to help raise awareness of the sustainability movement and how it is being put to use through WIPP's EMS.

Interested in WIPP?

If you would like to be notified when TRU TeamWorks is updated with the latest information about WIPP, send an e-mail message to TRUTeamWorks@wipp.ws .

Barn Swallows back at WIPP

The Barn Swallows are back from their winter vacation. Absent since last fall they have returned from their migrations to Mexico and South America to nest, among other places, at the WIPP site.

These birds (and all others except pigeons, starlings and sparrows) and their nests are protected under the Migratory Bird Treaty Act (MBTA). Once a nest is built, and there are eggs in it, the nest cannot be removed. The destruction or removal of active nests is only allowed by special permit from the U.S. Fish & Wildlife Service (USFWS). Only under certain emergency circumstances, and with USFWS approval, may bird nests, eggs, and young be moved from their location.

In the past, Barn Swallows have built nests around the site in and on all buildings. While some may be concerned about the bird nests on site for sanitary or aesthetic reasons, the birds should not be interfered with or harmed. Once nesting begins, the birds must be allowed access to and from their nests to care for their eggs and young.

If there are concerns about the location of a nest (of any bird species) on site, contact WRES, Site Environmental Compliance, for guidance. Federal requirements will be followed are to ensure WIPP maintains compliance with regulations.

For more information on Barn Swallows and a complete list of migratory birds that are protected under the MBTA, try the following Web sites:

http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/Barn_Swallow.html

http://www.fws.gov/migratorybirds/intrnltr/mbta/mbtandx.html

Submitted by WRES Environmental Compliance